

ASA Multidisciplinary Research Symposium 2017

Abstract

21st Century Synergies between Architecture and Transportation

Architecture is in the midst of understanding and absorbing massive changes in how we communicate, move through space and power our activities. Two areas in the Applied Sciences and Arts, architecture and transportation, are at the center of the current rethinking of our 21st century world. One key concern motivating many of these changes is global warming. The US Transportation Sector produces nearly thirty percent of all US global warming with the US building sector also contributing nearly 30 percent, these two sectors combined create the largest effect on our planet. These two aspects of our world are deeply intertwined and for long term solutions remaking of our world, they must be considered together.

The interrelationship of architecture and transportation created our earliest settlements and their combined ability to support and remake our world is deep and profound, affecting all aspects of who we are. The synergies that have not been possible in the past with transportation powering architecture and architecture powering transportation are now possible to provide a world in sync with the 21st century interconnections. Architecture students have been exploring these ideas in several 4th year and Masters Studios. Solar powered transportation is now possible and in combination with the Living Building Challenge can provide by 2030 sustainable resilient communities. One of the key concepts of the The Living Building Challenge seeks to create buildings that are self-sufficient within the resources of their site, producing more energy than they use. “Living buildings give more than they take, creating a positive impact on the human and natural systems that interact with them.” (<https://living-future.org/lbc/basics/>) How can buildings and transportation interact and interrelate to give more than they take? How can they support each other’s energy needs while sustaining our planet? How can they provide all of us with even greater mobility? The student ideas and solutions range from specific building designs for sustainability to large scale planning solutions for new communities’. These ideas and projects will be presented in detail and discussed as new visions for the 21st century.